

SYSTEM DATA SHEET

Sika® AcouBond® System

Elastic Bonding and Acoustical Dampening for Wood Floors

PRODUCT DESCRIPTION

The Sika® AcouBond® System incorporates Direct Bond Technology with acoustic performance. The Sika® AcouBond® System consists of SikaLayer®-03, a 1/8" (3 mm) proprietary specially slotted foam mat, and the SikaBond®-T53, unique permanently elastic, super strong, sound dampening adhesive that forms a tenacious bond to wood flooring, plywood subfloors, concrete, and other common subfloor materials

USES

The Sika® AcouBond® System is used to bond structurally sound solid and engineered hardwood in new construction and renovations in residential, office, and industrial buildings as well as sales and showrooms. It is commonly used over in-floor radiant heating and on grade cement and gypsum-based slabs. Field testing demonstrates unmatched sound reductions.

SikaLayer®-03: Specially designed, proprietary Polyethylene foam mat with symmetrically placed cut-outs to insert adhesive to achieve a high sound dampening effect.

SikaBond®-T53: Bonds solid wood flooring up to 8" (18 cm) wide and engineered planks up to 14" (36 cm) wide directly to concrete substrates. No limitations on maximum wood length.

CHARACTERISTICS / ADVANTAGES

- **SikaLayer®-03:** Dimensionally stable and pressure-resistant. Defined amount of adhesive consumption. Low weight for transport.
- **SikaBond®-T53:** 1 component, highly flexible ready-to-use polyurethane adhesive
- No limitations on maximum wood length. Bonds unlimited width solid and engineered planks directly to concrete substrates.
- 500% Elongation
- Fast curing for early green strength and superior holding power
- Extremely easy to install
- Independently tested to – IIC 59 and STC 60
- Independently tested to – FIIC 59 and FSTC 59
- Structurally bonds wood flooring to the subfloor
- Eliminates the extensive labor of installing cork underlayments
- No need for sleepers and plywood over concrete- and gypsum-based subfloors
- Innovative walk-on work method
- Can reduce overall installation costs up to 30%
- Suitable for bonding wood floors directly onto old ceramic tiles
- Reduces stress on the substrate

ENVIRONMENTAL INFORMATION

- LEED® EQc 4.1 (100 g/L limit) - Passes
- SCAQMD, Rule 1168 (100 g/L limit) - Passes
- BAAQMD, Reg. 8, Rule 51 (120 g/L limit) - Passes

APPROVALS / STANDARDS

Sika® AcouBond®-System with SikaLayer®-03:

- Independently tested to - IIC 59 (ASTM E 492) and STC 60 (ASTM E 90)(6 " concrete slab, 5/8 " suspended gypsum ceiling)
- Independently field tested to - FIIC 59 (ASTM E 1007) and FSTC 59 (ASTM E 336)(8 " concrete slab, no suspended ceilings)
- Reduction of Impact Sound Δ IIC = 24 (ASTM E 2179)

PRODUCT INFORMATION

Packaging	SikaLayer®-03:	Roll	54.7 ft. x 4.92 ft. = 269 ft ² (25 m ²). 12 rolls per pallet
	SikaBond®-T53:	Unipacs	20 oz (600 ml) unipacs. 20 unipacs per box
	Complete System	Roll and Unipacs	269 ft ² (1 roll of SikaLayer®-03 and 20 SikaBond®-T53 unipacs)
Approximately 13.4 ft ² per sausage (1 box of 20 sausages cover 269 ft ²). All cut-outs must be filled. Use application tip with triangular cut out to a 0.32 x 0.4 inch (8 x 10 mm) opening. Tips are included in the shipping carton. Tips can be reused. Do not discard. Allow adhesive residue to cure in the tip min. 24 hours and then remove.			
Shelf Life	SikaLayer®-03 SikaBond®-T53		Stored in dry conditions: Unlimited In unopened original packaging: 12 months from date of production
Storage Conditions	Temperatures between +50°F and +77°F (+10°C and +25°C). Store cool and dry. Protect against direct sunlight and frost.		

SYSTEM INFORMATION

Composition	SikaLayer®-03:	Polyethylene Foam
	SikaBond®-T53:	Polyurethane

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

SikaLayer®-03	
Chemical Base	Polyethylene foam
Density	1.87 lbs/ft ³ (30 kg/m ³)
Thickness	1/8 in. (3 mm)
Cut-Outs	5.6 cuts/ft ² (60 cuts/m ²)
Heat Conductivity	0.042 W/mK
Footfall Sound Reduction	up to 24 dB

SikaBond®-T53	
Specific Weight	10 lbs/gal (1.2 kg/l)
Tack-free Time	45-60 minutes at 73°F (23°C) and 50% RH
Curing Rate	1/8 inch (3.0 mm) in 24 hours at 73°F (23°C) and 50% RH. For proper curing of the sealant, sufficient ambient moisture is necessary (this can be from substrate or air). Floor may be sanded 24 hours after installation and light foot traffic only is acceptable after 6-8 hours (depending on climatic conditions and adhesive layer thickness).
Sag	No Sag – holds body after gunning
Service Temperature	-40°F to +158°F, suitable for in-floor radiant heating
Shear Strength	174 psi, 1 mm adhesive thickness at 73°F (23°C) and 50% RH
Tensile Strength	174 psi, cured at 73°F(23°C) and 50% RH
Shore "A" Hardness	40 after 28 days at 73°F (23°C) and 50% RH
Elongation at Break	500%, cured at 73°F (23°C) and 50% RH
VOC	48.3 (g/L)

LIMITATIONS

- Sika® AcouBond® System should be used with 2" (5 cm) wide or larger structurally sound solid hardwood and structurally sound engineered hardwood that can be either floated or nailed or stapled.
- SikaBond®-T53: Bonds unlimited width solid and engineered planks directly to concrete substrates.
- Minimum wood length 1' (one foot) is required to ensure that wood spans 3 (three) adhesive strips for standard placement. No maximum wood length.
- Structurally sound sufficient tongue and groove stability is necessary for this system.
- Minimum application temperature 50°F
- Sika® recommends following the wood floor manufacturer's recommendations, as to acclimation, maximum moisture content and application conditions.
- Do not use on wet, contaminated or friable substrates.
- Sika recommends the use of Portland Cement based patching and leveling compounds for best results.
- Do not use in areas subject to hydrostatic head or in areas subject to secondary source of moisture.
- Do not use over concrete with curing compounds, sealers or other surface treatments that could impact the adhesion.
- This adhesive will not prevent moisture-related

- damage to wood flooring installations.
- Subfloor should be level - do not use adhesive as a leveling agent.
- Cutback or other asphalt-based adhesives should be removed.
- Chemically treated woods (ammonia, wood stain, timber preservatives, etc.) and woods with high oil content must be tested for adhesion prior to application.
- Adhesive should be kept above 60°F for best workability.
- Sufficient ambient moisture is necessary for proper curing.
- Solid wood applications are best performed by an experienced installer.
- When bonding solid wood Sika® recommends the use of straps to fully connect tongue and groove - especially when wood pieces are not perfectly straight - a starter row may be appropriate to form a fixed location to tighten straps.
- Installations over radiant heat require that slab temperature be kept below 70°F during installation and for 48 hours after installation - then raised slowly up to final desired temperature. Follow wood floor manufacturer's temperature guidelines.
- Wood floors in noninsulated areas or areas without a damp proof membrane, must only be installed after the application of Sika® MB to control the moisture, if within product limitations. For detailed instructions consult the Product Data Sheets or contact our Technical Service Department. In case of chemically pretreated types of wood floors (eg. ammonia, wood stain, timber preservative or woods that have been pre/sealed on the back side) and woods with high oil content SikaBond® should only be used if adhesion tests are run by applicator prior to starting application. Do not use on PE, PP, TEFLON, and certain plasticized synthetic materials. (Carry out pretrials). Some primers can negatively influence the adhesion of SikaBond® (pretrials suggested). Do not expose SikaBond® to alcohol; this will impact the curing of the SikaBond®.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Clean and dry, homogeneous, even, free from grease, dust and loose particles. Paint, laitance and other poorly adhering particles must be removed by mechanical means.

Substrate Temperature

During laying and until SikaBond®-T53 has fully cured substrate temperature should be greater than 60°F (15°C) and in case of floor heating, less than 70°F (20°C).

Air Temperature

Room temperature between 60°F (15°C) and 90°F (35°C). For ambient temperatures the standard construction rules are relevant. Follow all wood floor manufacturer's acclimation and room temperature requirements.

Substrate Humidity

Moisture requirements are set forth to protect the wood flooring products that can expand and contract with different moisture levels. The Sika® AcouBond® System is not affected by moisture or vapor transmission. The guidelines below are included to provide the best practices in moisture vapor testing that exists today. Permissible substrate moisture contents are listed on the chart below. For more information on the use of the CM method please contact Troy Corporation at 973-443-4200.

Application	Moisture level requirements using Tramex method (%)	Moisture level requirements using CM method (%)
3/4" solid or engineered over concrete	4%	2.5%
3/4" solid or engineered over concrete with Sika® MB layer	6%	4%
3/4" solid or engineered over in-floor heating over concrete	3%	1.8%
3/4" solid or engineered over gypsum based	Tramex should not be used to measure gypsum	0.5%
3/4" solid or engineered over in-floor heating over gypsum-based	Tramex should not be used to measure gypsum	0.3%

The National Wood Flooring Association recommends the use of moisture testing devices that identify actual moisture content in percentages (%). For best results in measuring the moisture levels in cement based subfloor use the Tramex measuring device to find the highest

reading in the application area and then run the CM method at that highest point to determine the worst case. As a general guideline for floors with no in-floor heating if the Tramex is below 4 % the Sika® MB will not be necessary and between 4 % and 6 % Sika® MB will be required - however, the CM method must be used to make final determination of concrete moisture levels – use chart above. For moisture content and quality of substrates the guidelines of wood floor manufacturer must be observed.

SUBSTRATE PREPARATION

The Sika® AcouBond® System can generally be used without priming on properly prepared, structurally sound concrete, cement floors, chipboards, ceramic tiles, plywood, and hardwood. Sika recommends the use of Sika® MB over any dry, gypsum-based subflooring to enhance surface strength. The maximum acceptable floor variation is 3/16 in.(4.7 mm) in 10 ft (3 m). Preparation is a critical step in the installation process and will ensure a successful long-term tenacious bond. All concrete, cement screed, and gypsum-based subfloors must be structurally sound, clean, dry, smooth, free of voids, projections, loose materials, oil, grease, sealers and other surface contaminants. Remove laitance or weak areas mechanically. For application over ceramic tiles, it is necessary to grind tile surfaces and clean thoroughly with an industrial vacuum. For substrates with old well-bonded adhesive or adhesive residue use Sika® MB – see Sika® MB data sheet for installation instructions and proper details. If the surface contains asphalt (cutback) adhesive follow the Resilient Floor Covering Institute "Recommended Work Practices" for removal. When the asphalt (cutback) adhesive is sufficiently removed use Sika® MB to help promote adhesion to the subfloor – or use an industry-approved leveling compound over the cutback residue. The Sika® AcouBond® System will adhere to most common patching/ leveling compounds. Due to differences in asphalt-based adhesive types and performance capabilities applicator must verify that preparation of the surface is sufficient prior to using Sika® MB or patch/ level compound. For unknown substrates please contact Sika® Technical Services for best practices at 1-800-933-SIKA.

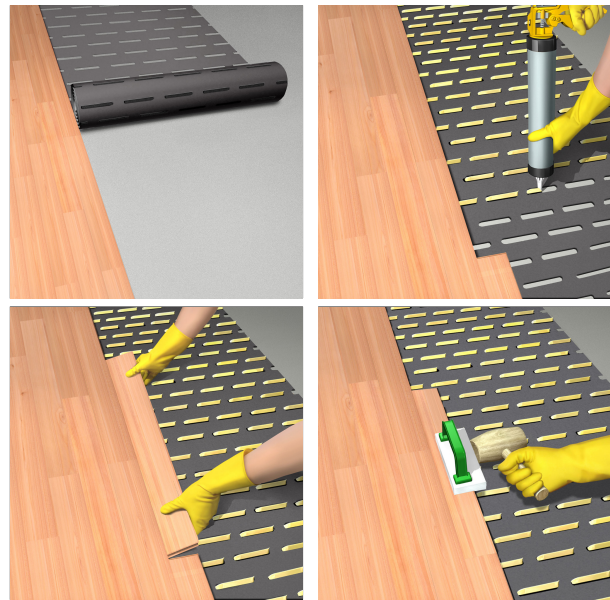
APPLICATION

Roll out SikaLayer®-03 mat on the properly prepared substrate, Tools parallel to the laying direction of the wood floor. The mat does not get glued to the subfloor – unless adhesive is used to keep the mat from sliding. The foam mat should be placed approximately 3/4" away from walls and approximately 3/4" away to any adjacent mat. This will allow for the placement of both a perimeter adhesive bead and an adhesive bead between any two adjacent mats. To apply the adhesive a sausage gun is required.

Apply the adhesive with manual or air-pressure-gun into all cut-outs with the supplied triangular nozzle. Also, apply adhesive beads at room perimeters and between adjacent mats as mentioned above. Take care to place only enough adhesive to allow sufficient time to place wood into adhesive while the adhesive is still very wet. Filling all cut-outs is a must. The nozzle must be held vertical to the substrate - 90-degree angle. Take care not to apply adhesive on top of the mat.

Position wood boards and firmly press into the adhesive until they lay tight on the SikaLayer® mat. The wood boards can then be joined together using a rubber mallet or hammer and an impact block. Follow the required distance from the wall to the wood floor in the laying instruction from the wood floor manufacturer. Spacers should be used to ensure perimeter space is maintained. When working at or near room perimeters, doorways or tight areas additional slots may be needed in the SikaLayer®-03 mat to accommodate short edge pieces and to ensure enough adhesive to securely hold the wood down. Use a razor knife to make cutouts in mat the same size as existing pre-cut openings.

Fresh, uncured adhesive remaining on the wood floor surface must be removed immediately with SikaBond® Remover. Failure to do so could result in a dulled finish. The laying instructions of the wood floor manufacturer as well as standard construction rules must be observed throughout the installation process.



CLEANING OF TOOLS

All tools must be cleaned immediately after use with SikaBond® Remover or standard industry cleaning solvent. Any adhesive that is permitted to cure on the tool will need to be removed by mechanical means. SikaBond® Remover can be used to remove uncured or cured adhesive and fingerprints from the wood surface.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the

obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs.

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Sika Corporation

201 Polito Avenue
Lyndhurst, NJ 07071
Phone: +1-800-933-7452
Fax: +1-201-933-6225
usa.sika.com

Sika Mexicana S.A. de C.V.

Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537



System Data Sheet

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